

# Blatt 1

Mike Lenz

18. April 2023

## Aufgabe 1

a)

$$\begin{aligned}\text{prec@5} &= \frac{3}{5} \\ \text{prec@10} &= \frac{4}{10} \\ \text{rec@10} &= \frac{2}{3} \\ \text{F1@10} &= \frac{1}{2}\end{aligned}$$

b)

Only when we don't consider all the documents in the result.

c)

Dunno what they want from me

## Aufgabe 2

a)

to, was, a, All, were, or, him, either, is, only, try, not, they, are, tried, everyone, someone, people,

b)

assassinate  $\rightarrow$  Assassination  
 Roman, Romans  $\rightarrow$  Roman  
 ruler, rulers  $\rightarrow$  Ruler  
 loyal  $\rightarrow$  Loyalty  
 hated  $\rightarrow$  Hate  
 Marcus  $\rightarrow$  Marcus  
 Caesar  $\rightarrow$  Caesar

stemming means to return the word to its root, e.g. assassinate  $\rightarrow$  assassin. So this is kinda wrong

c) (Using the list from the solution)

d1: marcus assassin caesar

d2: marcus rome

d3: caesar rule rome loyal caesar hate

d4: loyal people assassin rule loyal

## Aufgabe 3

	marcus	caesar	assassin	rome	rule	loyal	hate	people
$idf_{t,D}$	1	1	1	1	1	1	2	2
$ntf_{t,d}$	marcus	caesar	assassin	rome	rule	loyal	hate	people
d1	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	0	0	0	0	0
d2	$\frac{1}{2}$	0	0	$\frac{1}{2}$	0	0	0	0
d3	0	$\frac{1}{3}$	0	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	0
d4	0	0	$\frac{1}{5}$	0	$\frac{1}{5}$	$\frac{2}{5}$	0	$\frac{1}{5}$
$w_{t,d,D}$	marcus	caesar	assassin	rome	rule	loyal	hate	people
d1	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	0	0	0	0	0
d2	$\frac{1}{2}$	0	0	$\frac{1}{2}$	0	0	0	0
d3	0	$\frac{1}{3}$	0	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{3}$	0
d4	0	0	$\frac{1}{5}$	0	$\frac{1}{5}$	$\frac{2}{5}$	0	$\frac{2}{5}$

## Aufgabe 4

this one is just all of the above again why are you doing this to me. In the future i will do these tabular questions on paper because fuck these tables